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Tularemia - Endotoxin

by

Dr. Talat Vasfi Öz

The author was able to isolate an effective endotoxin from two *Pact.* tularense strains, strained by him from a Thracian boar in 1937. (See this periodical, Vol. 1, No. 2, Page 158 and the Report in the *Centrablatt für Bakteriologie I, Section - Reports*, Vol. 129, No. 5/6). The cultures were poured onto blood-cystin-agar in "petri" plates, strained, the culture soaked in sterile, distilled water, and this emulsion was autoclaved for 15 days at 37° and shaken twice daily, after which all bacteria appeared dead. The emulsion was centrifuged after a sterility test, and the resulting clear autolysate was dried in a vacuum over concentrated sulfuric acid. This dried endotoxin was dissolved in sterile distilled water, 50 milligrams to every ccm, and this bouillon colored solution after a second centrifuging was applied to the following experiments:

1. Intravenous injection of 0.3 ccm of this solution instantly kills white mice weighing 20 g, with pronounced cramps.
2. Intraperitoneal injection of the same dose of this solution kills white mice within 24 hours.
3. Intraperitoneal injection of the same dose of this solution kills guinea pigs weighing 250-300 g, with yelping cramps.
4. Intracutaneous injection of the same dose in the guinea pig results in acute vasoconstriction in the infection area.
5. An immune serum with a specific floccy reaction was obtained by repeated intravenous injection of a serum from human tularemia convalescents.

and from guinea pigs which had survived a chronic tularemia infection. This immune serum also neutralizes the localized vasoconstriction described above under No. 4).

6. The endotoxin is not effective hemolytically.

The author believes that his endotoxin could be used in standardizing tularemia cure serum, and in the infected state as an inoculation against possible tularemia.

Transferred
by S. W. C. C.